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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/708,260	ABRAMSON ET AL.	
	Examiner	Art Unit	
	KEVIN S. MAI	2456	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 8-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 8-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/6/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action has been issued in response to Applicant's Amendment filed July 6, 2009.

2. Claim 7 has been canceled. Claim 18 has been amended. Claim 19 has been added. Claims 1-6 and 8-19 have been examined and are pending.

Response to Arguments

3. Applicant's arguments filed July 6, 2009 have been fully considered but they are not persuasive.

4. Applicant states that the recited claim language "during retrieval of a content file" is clear and does not need to be amended. Examiner maintains his stance that the phrase can still refer to the retrieval process in general and not necessarily refer only to the time when data of the content file are being transferred.

5. Applicant's arguments with respect to the objection of claim 18 have been considered but they are not persuasive. The term computer readable medium is not used in the specification, the specification describes computer program means embodied on an article of manufacture. While the portions cited in applicants arguments do tie article of manufacture to statutory embodiments, the term computer readable medium is not used in the specification and has not been confined to tangible embodiments.

6. Applicant's arguments with respect to claim 1 have been considered but they are not persuasive. Applicant argues Singal does not teach or suggest "wherein the download manager retrieves a remainder of the content file in response to the presentation manager displaying the

retrieved portion of the content file." Examiner disagrees. Applicant states that Singal discloses loading its media suffix and streaming the media object as two independent steps that may occur sequentially or concurrently. However this is not the case. While the steps may occur sequentially or concurrently it is seen that according to figure 5 in situations where the steps occur sequentially one must perform the former action prior to moving on to the next step. Accordingly if the latter step will only begin in response to the fulfilling the requirement of the former step of the flow chart, it is seen that the latter step occurs in response to the former step. Furthermore it is seen that loading the suffix occurs in response to the user requesting the video for play, and accordingly this would also support that the suffix is retrieved in response to the playing of the video.

7. Applicant's arguments with respect to the remaining claims are the same as those provided for claim 1. Accordingly examiner recites the same response used above.

Claim Objections

8. Claim 18 is objected to because of the following informalities: Claim 18 recites 'computer readable medium' which is not otherwise limited in the specification. As such it could be open to interpretations such as signals. Signals alone are not statutory subject matter. Previously the usage of the phrase "article of manufacture" differentiated it from this interpretation.

Claim Rejections - 35 USC § 112

9. In view of the arguments, amendments, and cancellations the pending claim rejections under 35 USC § 112 have been withdrawn.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1-6, 8-13, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 6859840 to Singal et al. (hereinafter "Singal") and further in view of US Pub. No. 2001/0029523 A1 to Mcternan et al. (hereinafter "Mcternan") and further in view of US Pub. No. 2003/0016630 to Vega-Garcia et al. (hereinafter "Vega-Garcia).

13. **As to Claim 1,** Singal discloses **a system comprising:**

a mass storage device (Column 7 lines 35 – 45 of Singal discloses a mass storage device, such as a disk drive, that may be used to provide storage for computer programs, media objects and associated files);

a processor (Figure 6 of Singal discloses a processor);

determining during retrieval of a content file, a bandwidth of a network connection over which the content file is being retrieved (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size. Thus it is seen that during the retrieval of the prefix the bandwidth is being measured.

It is noted that Singal discloses the measurement of the prefix based on bandwidth in the scenario where the file is unavailable on the edge server at the time of a request. However Singal also discloses preloading prefixes on the edge server prior to a request. Although it is not explicitly disclosed to measure the size of the preloaded prefix based on the bandwidth, it would be obvious to apply the same logic used for the scenario in which the file is unavailable to calculate

these prefix sizes. This idea of using the bandwidth for the preloaded prefixes is further supported in Singal in column 5 lines 55 – 65 which states the prefix is distributed to the edge server wherein the prefix size can be determined manually or automatically based on network capacity and/or other conditions. Which is read to imply the usage of bandwidth measurement to determine the amount sent);

retrieving and storing in the mass storage device a portion of the content file, the download manager determining a size of the portion to retrieve in response to the determination made by the bandwidth measurement device (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size); **and**

wherein the download manager retrieves a remainder of the content file in response to the presentation manager displaying the retrieved portion of the content file (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose that in steps 166 the suffix is loaded in parallel and in step 168 streaming begins. It is clarified that although steps 166 and 168 are shown sequentially, streaming in step 168 may also begin before or concurrently with step 166).

Singal does not explicitly disclose **a bandwidth measurement device executed by said processor.**

However, Mcternan discloses this (Paragraph [0045] of Mcternan discloses that the server receives data indicating the available bandwidth for transmission of the presentation to the client, such as from a benchmarking program running on the client. The benchmarking program can measure various parameters, including bandwidth between the server and client)

Singal does not explicitly disclose **a download manager executed by said processor.**

However, Mcternan discloses this (Paragraph [0070] of Mcternan discloses a Media Player containing several components or systems including a Download Manager)

Singal does not explicitly disclose **a presentation manager executed by said processor for retrieving the portion of the content file from mass storage and displaying the portion with a media player application.**

However, Mcternan discloses this (Paragraph [0101] of Mcternan discloses data contained in the Agent's buffer is decoded and passed to appropriate Renderer's to produce output to the viewer. In here taking the data from the buffer reads on the retrieving the content file and passing it to an appropriate renderer is the same as displaying on a media player application)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine downloading a prefix based on bandwidth as disclosed by Singal, with the media player client system (bandwidth measurement device, download manager, and presentation manager) as disclosed by Mcternan. One of ordinary skill in the art at the time the invention was made would have been motivated to combine in order provide a system on which Singal's method of downloading a prefix could work. The components disclosed by Mcternan are not explicitly disclosed in Singal, however using these components with Singal's method would be obvious. This is because the components are implied by the method. The bandwidth measurement device is implied because Singal talks of taking bandwidth measurements and as such it would be obvious to have a component to do this. Similarly, the download manager is implied by Singal's invention because it deals with downloading files and making decisions on

continuing downloads or terminating them. Finally, the presentation manager would be inherent in any system claiming to display media objects because without one there would be no purpose to distribute the media in the first place. Thus it is seen that it would be obvious to combine Singal and Mcternan.

Singal does not explicitly disclose the bandwidth determination being done **dynamically.**

However, Vega-Garcia disclose this (Paragraph [0035] of Vega-Garcia discloses periodically sending dummy packets along with control packets to provide persistent proving of the network. This provides a way of persistently approximating the bandwidth capacity between devices engaged in the session)

It would have been obvious to one of ordinary skill in the art at the time of invention to combine downloading a prefix based on bandwidth as disclosed by Singal, with having the bandwidth measurement be done persistently as disclosed by Vega-Garcia. One of ordinary skill in the art would have been motivated to combine improve the accuracy of the measurement. Using the persistent bandwidth measurement process in place of Singal's measurement process is seen to be simple substitution of one known element for another to obtain predictable results. Both measurement processes were well known in the art at the time of invention and as such would be obvious to use them interchangeably for their known benefits.

14. **As to Claim 2,** Singal-Mcternan-Vega-Garcia discloses **the system of claim 1 wherein the bandwidth measuring device makes a second determination of the bandwidth of the network connection over which the content file is being retrieved , and the download manager responsive to the second determination establishes a second size for the portion of**

the content file to retrieve (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose a scenario in which not enough of a prefix has been cached at the edge server. This initial prefix is the prefix that would have been calculated in claim 1. When a video is requested the bandwidth needed to playback the video smoothly is calculated based on the current prefix size and the size of the whole file (step 170). It then measures the bandwidth to see if enough is available (step 172). If not enough bandwidth is available it goes onto steps 158 and 160 which involve measuring the bandwidth and computing a new prefix size. This is seen to be the same as a second bandwidth determination establishing a second size of the content file).

15. **As to Claim 3,** Singal-Mcternan-Vega-Garcia discloses **the system of claim 1 wherein the bandwidth measurement device uses a timer data value, a total size of the portion, and a current progress of the retrieval of the portion to determine when the download manager has downloaded a sufficient portion of the content file such that the download manager would be able to download the remainder of the data file before the player application finishes playing the portion of the content file from mass storage** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose computing the prefix size in such a fashion such that starvation is avoided (step 160). The formula used is $p' = T(1 - R/B)$ where p' is the prefix size calculated to be downloaded, T is the total size of the file, B is the file bit rate, and R is the transfer rate of the file. Then in steps 162 and 164 data (d) is loaded until d is $\geq p'$. Thus the two rates, R and B, are seen to be equivalent to the timer data value, the total size is considered in T, and the current progress is seen to be the same as d).

16. **As to Claim 4,** Singal-Mcternan-Vega-Garcia discloses **the system of claim 1 wherein the bandwidth measurement device comprises a timer** (Paragraph [0027] of Vega-Garcia discloses utilizing time between packets to determine bandwidth. This is seen to be using a timer).

Examiner recites the same rationale to combine used in claim 1.

17. **As to Claim 5,** Singal-Mcternan-Vega-Garcia discloses **the system of claim 1.** Singal-Mcternan-Vega-Garcia does not explicitly disclose **wherein the bandwidth measurement device and the download manager comprise a single process**

However it would have been obvious in view of Singal (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose measuring the bandwidth in order to load the correct amount of data. This is seen to be having the bandwidth measurement and downloading happening within a single process. As such it would be obvious to have the bandwidth measurement device and the download manager disclosed by Mcternan to be a single process).

18. **As to Claim 6,** Singal-Mcternan-Vega-Garcia discloses **the system of claim 1.** Singal-Mcternan-Vega-Garcia does not explicitly disclose **wherein the download manager comprises a thread process**

However it would have been obvious to have Singal-Mcternan-Vega-Garcia perform this limitation. Making a program a thread process is a well-known and thoroughly documented idea. Threaded processes have the advantage that they can perform several tasks concurrently

without the extra overhead needed to create a new process. Since making a program into a threaded process would tend to make it faster to execute it would be obvious to one of ordinary skill in the art at the time of invention to improve the download manager by making it a threaded process.

19. **As to Claim 8,** Singal-Mcternan-Vega-Garcia discloses **the system of claim 1 wherein the download manager continues retrieving the remainder of the content file prior to the presentation manager displaying the portion of the content file from mass storage** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose a scenario where the file is already fully available. This inherently discloses the idea of retrieving the rest of the file prior to display. However it is further shown that even in the scenario where the file has not already been fully downloaded Singal states the steps 166 and 168 (loading the suffix and streaming) can happen either sequentially in any order or simultaneously. Thus it is seen that loading the suffix before streaming is supported).

20. **As to Claim 9,** Singal-Mcternan-Vega-Garcia discloses **the system of claim 1 wherein the presentation manager comprises a Windows Media Player application** (Column 6 lines 20 – 25 of Singal discloses using Windows Media Server to provide the streaming media. This would imply the usage of the Window Media Player on the client side).

21. **As to Claim 10,** Singal discloses **a method for efficiently downloading a page of broadband content including at least one content file, the method comprising the steps of**

(Abstract of Singal discloses a system for delivering media objects to a user over a computer network):

(a) retrieving a content file (Column 6 lines 50 – 55 Singal discloses a user connected to an edge server requests delivery of a media object associated with a URL);

(b) determining during the retrieval of the content file, a bandwidth of a network connection over which the content file is being retrieved (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size. Thus it is seen that during the retrieval of the prefix the bandwidth is being measured.

It is noted that Singal discloses the measurement of the prefix based on bandwidth in the scenario where the file is unavailable on the edge server at the time of a request. However Singal also discloses preloading prefixes on the edge server prior to a request. Although it is not explicitly disclosed to measure the size of the preloaded prefix based on the bandwidth, it would be obvious to apply the same logic used for the scenario in which the file is unavailable to calculate these prefix sizes. This idea of using the bandwidth for the preloaded prefixes is further supported in Singal in column 5 lines 55 – 65 which states the prefix is distributed to the edge server wherein the prefix size can be determined manually or automatically based on network capacity and/or other conditions. Which is read to imply the usage of bandwidth measurement to determine the amount sent);

(c) determining, by the download manager a size of a portion of the content file to retrieve in response to the bandwidth determination by the bandwidth measurement device (Figure

5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size);

(d)terminating, by the download manager retrieval of the content file upon receiving the determined size of the portion of the content file (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose in step 162 only loading data until the data amount is greater than or equal to the prefix size);

(e) displaying with a media player application the retrieved portion of the content file (Column 6 lines 45 – 50 of Singal disclose using QuickTime to play the video stream); **and**

(f)retrieving, in response to step (e), the remainder of the content file (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose that in steps 166 the suffix is loaded in parallel and in step 168 streaming begins. It is clarified that although steps 166 and 168 are shown sequentially, streaming in step 168 may also begin before or concurrently with step 166).

Singal does not explicitly disclose **a download manager executed by a processor.**

However, Mcternan discloses this (Paragraph [0070] of Mcternan discloses a Media Player containing several components or systems including a Download Manager).

Singal does not explicitly disclose **a bandwidth measurement device executed by said processor,**

However, Mcternan discloses this (Paragraph [0045] of Mcternan discloses that the server receives data indicating the available bandwidth for transmission of the presentation to the

client, such as from a benchmarking program running on the client. The benchmarking program can measure various parameters, including bandwidth between the server and client).

Examiner recites the same rationale to combine used in claim 1.

Singal does not explicitly disclose the bandwidth determination being done **dynamically.**

However, Vega-Garcia disclose this (Paragraph [0035] of Vega-Garcia discloses periodically sending dummy packets along with control packets to provide persistent proving of the network. This provides a way of persistently approximating the bandwidth capacity between devices engaged in the session)

Examiner recites the same rationale to combine used in claim 1.

22. **As to Claim 11,** Singal-Mcternan-Vega-Garcia discloses **the method of claim 10 further comprising making, by the bandwidth measurement device, a second determination of the bandwidth of a network connection over which the content file is retrieved during retrieval and determining, by the download manager in response to the bandwidth measurement device, a second size of the portion of the content file to retrieve** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose a scenario in which not enough of a prefix has been cached at the edge server. This initial prefix is the prefix that would have been calculated in claim 1. When a video is requested the bandwidth needed to playback the video smoothly is calculated based on the current prefix size and the size of the whole file (step 170). It then measures the bandwidth to see if enough is available (step 172). If not enough bandwidth is available it goes onto steps 158 and 160 which involve measuring the

bandwidth and computing a new prefix size. This is seen to be the same as a second bandwidth determination establishing a second size of the content file).

23. **As to Claim 12,** Singal-Mcternan-Vega-Garcia discloses **the method of claim 10 further compromising using, by the bandwidth measurement device, a timer data value, a total size of the retrieval, and a current progress of the portion retrieved to determine when the download manager has downloaded a sufficient portion of the content file such that the download manager is able to download the remainder of the data file before the player application finishes playing the portion of the content file from mass storage** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose computing the prefix size in such a fashion such that starvation is avoided (step 160). The formula used is $p' = T(1 - R/B)$ where p' is the prefix size calculated to be downloaded, T is the total size of the file, B is the file bit rate, and R is the transfer rate of the file. Then in steps 162 and 164 data (d) is loaded until d is $\geq p'$. Thus the two rates, R and B, are seen to be equivalent to the timer data value, the total size is considered in T, and the current progress is seen to be the same as d).

24. **As to Claim 13,** Singal-Mcternan-Vega-Garcia discloses **the method of claim 10 wherein the download manager continues retrieving the remainder of the content file prior to the presentation manager displaying the portion of the content file from mass storage** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose a scenario where the file is already fully available. This inherently discloses the idea of retrieving the rest of the file prior to display. However it is further shown that even in the scenario where the file has not

already been fully downloaded Singal states the steps 166 and 168 (loading the suffix and streaming) can happen either sequentially in any order or simultaneously. Thus it is seen that loading the suffix before streaming is supported).

25. **As to Claim 15,** Singal-Mcternan-Vega-Garcia discloses **the method of claim 10 wherein step (f) comprises retrieving, in response to step (e), the remainder of the content file from a multicast network** (Paragraph [0042] of Mcternan discloses that in preferred embodiments, the client device works in a highly autonomous manner, thereby allowing the server to use multicast techniques to distribute data to many clients simultaneously).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of claim 10 as disclosed by Singal-Mcternan-Vega-Garcia, with utilizing multicast as disclosed by Mcternan. One of ordinary skill in the art at the time the invention was made would have been motivated to combine in order to more efficiently distribute its media. Using multicast networks is well known to allow for more efficient usage of bandwidth and thus would reduce the system traffic of Singal's invention.

26. **As to Claim 16,** Singal-Mcternan-Vega-Garcia discloses **the method of claim 10 further comprising the step of displaying with a media player application the remainder of the content file** (Column 6 lines 45 – 50 of Singal disclose using QuickTime to play the video stream).

27. **As to Claim 17,** Singal-Mcternan-Vega-Garcia discloses **the method of claim 10 wherein step (e) and step (f) occur substantially concurrently** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose that in steps 166 the suffix is loaded in parallel and in step 168 streaming begins. It is clarified that although steps 166 and 168 are shown sequentially, streaming in step 168 may also begin before or concurrently with step 166).

28. **As to Claim 18,** Singal discloses **a computer readable medium containing instructions executable by a computer for performing a method for efficiently downloading a page of broadband content including a first content file and a second content file, the method comprising** (Abstract of Singal discloses a system and computer readable medium for delivering media objects to a user over a computer network):
retrieving a content file (Column 6 lines 50 – 55 Singal discloses a user connected to an edge server requests delivery of a media object associated with a URL);
dynamically determining during retrieval of the content file a bandwidth of a network connection over which the content file is being retrieved (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size. Thus it is seen that during the retrieval of the prefix the bandwidth is being measured.
It is noted that Singal discloses the measurement of the prefix based on bandwidth in the scenario where the file is unavailable on the edge server at the time of a request. However Singal also discloses preloading prefixes on the edge server prior to a request. Although it is not explicitly

disclosed to measure the size of the preloaded prefix based on the bandwidth, it would be obvious to apply the same logic used for the scenario in which the file is unavailable to calculate these prefix sizes. This idea of using the bandwidth for the preloaded prefixes is further supported in Singal in column 5 lines 55 – 65 which states the prefix is distributed to the edge server wherein the prefix size can be determined manually or automatically based on network capacity and/or other conditions. Which is read to imply the usage of bandwidth measurement to determine the amount sent);

determining a size of a portion of the content file to retrieve in response to the bandwidth measurement determination (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size);

terminating retrieval of the content file upon receiving of the determined size of the portion of the content file (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose in step 162 only loading data until the data amount is greater than or equal to the prefix size);

displaying with a media player application the retrieved portion of the content file (Column 6 lines 45 – 50 of Singal disclose using QuickTime to play the video stream); **and**

retrieving, in response to displaying with a media player application the retrieved portion of the content file, the remainder of the content file (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose that in steps 166 the suffix is loaded in parallel and in

step 168 streaming begins. It is clarified that although steps 166 and 168 are shown sequentially, streaming in step 168 may also begin before or concurrently with step 166).

Singal does not explicitly disclose **a bandwidth measurement device.**

However, Mcternan discloses this (Paragraph [0045] of Mcternan discloses that the server receives data indicating the available bandwidth for transmission of the presentation to the client, such as from a benchmarking program running on the client. The benchmarking program can measure various parameters, including bandwidth between the server and client).

Singal does not explicitly disclose **a download manager** (Paragraph [0070] of Mcternan discloses a Media Player containing several components or systems including a Download Manager). Singal discloses,

Examiner recites the same rationale to combine used in claim 1.

Singal does not explicitly disclose the bandwidth determination being done **dynamically.**

However, Vega-Garcia disclose this (Paragraph [0035] of Vega-Garcia discloses periodically sending dummy packets along with control packets to provide persistent proving of the network. This provides a way of persistently approximating the bandwidth capacity between devices engaged in the session)

Examiner recites the same rationale to combine used in claim 1.

29. **As to Claim 19,** Singal discloses **a system comprising:**

a mass storage device (Column 7 lines 35 – 45 of Singal discloses a mass storage device, such as a disk drive, that may be used to provide storage for computer programs, media objects and associated files);

a processor (Figure 6 of Singal discloses a processor);

determining, prior to retrieval of a content file, a bandwidth of a network connection over which the content file will be retrieved (Figure 5 of Singal discloses the bandwidth being determined prior to the retrieval of the content);

retrieving, and storing in the mass storage device, a portion of the content file, the download manager determining a size of the portion to retrieve in response to the determination made by the bandwidth measurement device (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size); **and wherein the download manager retrieves a remainder of the content file in response to the presentation manager displaying the retrieved portion of the content file** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose that in steps 166 the suffix is loaded in parallel and in step 168 streaming begins. It is clarified that although steps 166 and 168 are shown sequentially, streaming in step 168 may also begin before or concurrently with step 166).

Singal does not explicitly disclose **a bandwidth measurement device executed by said processor.**

However, Mcternan discloses this (Paragraph [0045] of Mcternan discloses that the server receives data indicating the available bandwidth for transmission of the presentation to the client, such as from a benchmarking program running on the client. The benchmarking program can measure various parameters, including bandwidth between the server and client)

Singal does not explicitly disclose **a download manager executed by said processor.**

However, Mcternan discloses this (Paragraph [0070] of Mcternan discloses a Media Player containing several components or systems including a Download Manager)

Singal does not explicitly disclose **a presentation manager executed by said processor for retrieving the portion of the content file from mass storage and displaying the portion with a media player application.**

However, Mcternan discloses this (Paragraph [0101] of Mcternan discloses data contained in the Agent's buffer is decoded and passed to appropriate Renderer's to produce output to the viewer. In here taking the data from the buffer reads on the retrieving the content file and passing it to an appropriate renderer is the same as displaying on a media player application)

Examiner recites the same rationale to combine used in claim 1.

Singal does not explicitly disclose the bandwidth determination being done **dynamically.**

However, Vega-Garcia disclose this (Paragraph [0035] of Vega-Garcia discloses periodically sending dummy packets along with control packets to provide persistent proving of the network. This provides a way of persistently approximating the bandwidth capacity between devices engaged in the session)

Examiner recites the same rationale to combine used in claim 1.

30. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singal-Mcternan-Vega-Garcia and further in view of U.S. Pub. No. 2004/0128343 to Mayer (hereinafter "Mayer").

31. **As to Claim 14,** Singal-Mcternan-Vega-Garcia discloses **the method of claim 10.** Singal-Mcternan-Vega-Garcia does not explicitly disclose **wherein step (f) comprises retrieving, in response to step (e), the remainder of the content file from a peer-to-peer network.**

However, Mayer discloses this (Paragraph **[0047]** of Mayer discloses that in another preferred embodiment, program segments A are shared by end-users, interconnected by broadband, through peer-to-peer technology).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of claim 10 disclosed by Singal and Mcternan, with using a peer-to-peer network disclosed by Mayer. One of ordinary skill in the art at the time the invention was made would have been motivated to combine in order to reduce the overhead of the provider and be able to more efficiently use their own bandwidth.

Conclusion

32. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN S. MAI whose telephone number is (571)270-5001. The examiner can normally be reached on Monday through Friday 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. S. M./

Examiner, Art Unit 2456

/Bunjob Jaroenchonwanit/

Supervisory Patent Examiner, Art Unit 2456